

Clean Copy of the Claims As Amended in the Amendment Dated August 24, 2001

Sub D
C3 Claim 23. A process for preparing a gasoline-oxygenate blend comprising combining a neat blend of hydrocarbons with an alcohol, wherein the resulting gasoline-oxygenate blend has the following properties:

- (a) a Dry Vapor Pressure Equivalent less than about 7.1 PSI; and
- (b) an alcohol content greater than about 5.8 volume percent.

Claim 24. The process of Claim 23 wherein the alcohol is ethanol.

Sub D
C4 Claim 26. A process for preparing a gasoline-oxygenate blend comprising combining a neat blend of hydrocarbons with an alcohol, wherein the resulting gasoline-oxygenate blend has the following properties:

- (a) a Dry Vapor Pressure Equivalent less than about 7.0 PSI; and
- (b) an alcohol content greater than about 5.0 volume percent.

Claim 27. The process of Claim 26 wherein the alcohol is ethanol.

event that a plurality of gasoline-oxygenate Phase I blend recipes were made for each neat blend A-X, the corresponding gasoline-oxygenate Phase I blend recipes in Table 8 have been designated by the blend letter designation, for example A, followed by a numerical designation, for example 1, such that the gasoline-oxygenate property shown in Tables 9-10 correspond to the blend letter, and number designation, if applicable. Accordingly, Table 8, entitled "Phase I Gasoline-Oxygenate Blend Recipes," shows each gasoline-oxygenate blend recipe in terms of volume percent of the total blend after the introduction of oxygenates.

TABLE 8: PHASE I GASOLINE-OXYGENATE BLEND RECIPES

| BLEND | EtOH | C4 | FFB | RAFF | HOR | TOL | LCC | ALKY | LSCC | HCC |
|-------|---|------|------|-------|-------|-------|-------|-------|-------|-------|
| | (in terms of volume percent of the total blend) (%) | | | | | | | | | |
| A1 | 9.50 | 0.00 | 1.27 | 0.00 | 20.72 | 17.92 | 8.05 | 42.54 | 0.00 | 0.00 |
| A2 | 5.42 | 0.0 | 1.3 | 0.0 | 21.7 | 18.7 | 8.4 | 44.5 | 0.0 | 0.0 |
| B1 | 9.50 | 0.00 | 0.00 | 15.39 | 16.20 | 9.41 | 0.00 | 23.89 | 10.59 | 15.02 |
| B2 | 5.42 | 0.0 | 0.0 | 16.1 | 16.9 | 9.8 | 0.0 | 25.0 | 11.1 | 15.7 |
| C1 | 9.50 | 1.45 | 0.00 | 0.00 | 14.93 | 27.60 | 13.39 | 33.12 | 0.00 | 0.00 |
| C2 | 5.42 | 1.5 | 0.0 | 0.0 | 15.6 | 28.8 | 14.0 | 34.6 | 0.0 | 0.0 |
| D1 | 9.50 | 0 | 0 | 15.7 | 24.8 | 0 | 12.8 | 15.7 | 18.6 | 2.9 |
| D2 | 5.42 | 0.0 | 0.0 | 16.5 | 25.9 | 0.0 | 13.3 | 16.5 | 19.4 | 3.0 |
| E1 | 9.50 | 0.00 | 0.00 | 22.63 | 25.25 | 0.00 | 0.00 | 15.84 | 16.83 | 9.86 |
| E2 | 5.42 | 0.0 | 0.0 | 23.6 | 26.4 | 0.0 | 0.0 | 16.6 | 17.6 | 10.3 |
| F1 | 9.50 | 0.00 | 0.00 | 9.14 | 9.23 | 32.85 | 16.47 | 22.81 | 0.00 | 0.00 |
| F2 | 5.42 | 0.0 | 0.0 | 9.6 | 9.6 | 34.3 | 17.2 | 23.8 | 0.0 | 0.0 |
| G1 | 9.50 | 0.09 | 3.35 | 0.00 | 34.39 | 7.15 | 9.50 | 35.93 | 0.00 | 0.00 |
| G2 | 5.42 | 0.1 | 3.5 | 0.0 | 35.9 | 7.5 | 9.9 | 37.5 | 0.0 | 0.0 |
| H | 9.50 | 0.00 | 0.00 | 12.49 | 15.48 | 0.00 | 0.09 | 25.61 | 18.55 | 18.19 |
| I1 | 9.50 | 0.00 | 1.81 | 19.10 | 8.78 | 19.28 | 11.31 | 9.68 | 20.54 | 0.00 |
| I2 | 5.42 | 0.0 | 1.9 | 20.0 | 9.2 | 20.1 | 11.8 | 10.1 | 21.5 | 0.0 |
| J1 | 9.50 | 0.00 | 1.45 | 0.00 | 31.77 | 9.59 | 12.94 | 32.67 | 0.00 | 2.08 |
| J2 | 5.42 | 0.0 | 1.5 | 0.0 | 33.2 | 10.0 | 13.5 | 34.1 | 0.0 | 2.2 |
| K1 | 9.50 | 0.00 | 0.00 | 20.27 | 17.47 | 13.39 | 7.24 | 20.72 | 10.05 | 1.36 |
| K2 | 5.42 | 0.0 | 0.0 | 21.2 | 18.3 | 14.0 | 7.6 | 21.7 | 10.5 | 1.4 |
| L1 | 9.40 | 0.00 | 0.00 | 23.47 | 16.13 | 7.34 | 13.32 | 10.87 | 17.03 | 2.54 |
| L2 | 5.42 | 0.0 | 0.0 | 24.5 | 16.8 | 7.7 | 13.9 | 11.3 | 17.8 | 2.6 |
| M | 9.50 | 0.00 | 0.00 | 11.67 | 19.10 | 0.18 | 9.96 | 20.27 | 17.20 | 12.13 |

C2

| | | | | | | | | | | |
|----|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| N | 9.72 | 0.00 | 0.72 | 18.33 | 4.15 | 23.20 | 17.42 | 0.00 | 17.33 | 9.21 |
| O1 | 9.79 | 0.00 | 2.71 | 0.00 | 20.57 | 15.97 | 9.11 | 36.26 | 0.00 | 5.68 |
| O2 | 5.42 | 0.0 | 2.8 | 0.0 | 21.6 | 16.7 | 9.6 | 38.0 | 0.0 | 6.0 |
| P | 9.72 | 0.00 | 0.00 | 15.98 | 0.00 | 19.23 | 6.68 | 19.41 | 15.80 | 13.27 |
| Q | 9.64 | 0.00 | 0.00 | 17.80 | 4.70 | 14.64 | 3.34 | 12.83 | 18.61 | 18.52 |
| Q2 | 5.42 | 0.0 | 0.0 | 18.6 | 4.9 | 15.3 | 3.5 | 13.4 | 19.5 | 19.4 |
| R1 | 9.59 | 0.00 | 0.00 | 20.52 | 17.36 | 5.33 | 7.23 | 5.79 | 23.87 | 10.22 |
| R2 | 5.42 | 0.0 | 0.0 | 21.5 | 18.2 | 5.6 | 7.6 | 6.1 | 25.0 | 10.7 |
| S1 | 9.69 | 0.00 | 0.99 | 11.56 | 0.00 | 26.55 | 14.54 | 36.76 | 0.00 | 0.00 |
| S2 | 5.42 | 0.0 | 1.0 | 12.1 | 0.0 | 27.8 | 15.2 | 38.5 | 0.0 | 0.0 |
| T | 9.66 | 0 | 0 | 13.5 | 15.3 | 4.2 | 15.4 | 12.3 | 26.6 | 3.3 |
| U | 9.66 | 0 | 0 | 4.2 | 12.8 | 15.7 | 7.5 | 32.2 | 0 | 17.9 |
| V | 9.81 | 0 | 0 | 19.1 | 13.3 | 0 | 0 | 17.2 | 26.8 | 13.7 |
| W | 9.67 | 0 | 0 | 0 | 32 | 11.8 | 26.7 | 19.7 | 0 | 0 |
| X | 9.65 | 0 | 0 | 9.7 | 0 | 0.4 | 0.73 | 34.5 | 24 | 21.1 |

Each of the gasoline-oxygenate blends was tested offline using the appropriate laboratory ASTM procedure found in the *Standard Test Method for Research Octane Number of Spark-Ignition Engine Fuel*, ASTM D 2699, the *Standard Test Method for Motor Octane Number of Spark-Ignition Engine Fuel*, ASTM D 2700, the *Standard Test Method for Vapor Pressure of Petroleum Products (Mini Method)*, ASTM D 5191, and the *Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure*, ASTM D 86.

As before, each blend designation shown below corresponds to the gasoline-oxygenate blend recipe shown in Table 8. For example, gasoline-oxygenate blend A1 in Table 9 corresponds to the blend recipe shown for gasoline-oxygenate blend designation A1 in Table 8. Similarly, gasoline-oxygenate blend A2 below corresponds to the gasoline-oxygenate blend designation A2 in Table 8. With these designations in mind, the following gasoline-oxygenate blend properties were determined.